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AUDIOVISUAL INSTRUCTION

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the EDITOR'S notebook

Top Ten "Member Getters" for 1959-60

TOP MEMBERSHIP HONORS this year are shared by two South Carolinians—J. K. East, state supervisor of audiovisual education and state DAVI membership chairman, and L. G. Rackley, South Carolina State College.

East

Rackley

Davis

Stepp

Friars

Sanner

de la Luz

Biggs

Dome

Hunt

With 30 members each to their credit, these men have brought their state back up to affiliate status. Previous reports on their activities appeared in the November and December issues.

Others among the top ten member getters are: A. B. Davis, state AV supervisor for Louisiana, 17 members; Robert Stepp, head, bureau of audiovisual instruction, University Extension Division, University of Nebraska, 16 members; Lola Friars, audiovisual director, Tacoma (Washington) public schools, 13 members; Richard Sanner, audiovisual director, University of Hawaii, 11 members; Teofila G. de la Luz, audiovisual director, University of Puerto Rico, 11 members; Walter Biggs, film librarian, State College Station, Fargo, North Dakota, nine members; John Dome, audiovisual director, Miami University, nine members; and Ronald Hunt, audiovisual coordinator, San Diego city schools, eight members.

Writes Miss Friars: "Please make it clear that the reason my name appears on so many membership applications is that I happen to be secretary-treasurer of Washington DAVI. Without the cooperation and diligent work of other members, I never could have landed in the top ten 'member getters.'"

DAVI members with five or more recruits to their credit are: Theodore Beers, Indiana; James Boula, Illinois; Don Ely, New York State; Mary Renner, Pennsylvania; R. A. Frye, New Mexico; Donald Brumbaugh, Utah; Ray Wiman, California; and G. D. Kilpatrick, Vancouver, B. C.

Plans are now underway for a different kind of membership campaign next year—one which will put more responsibility on the affiliates, less on the national office. The goal will be to bring every member of every state association into the national organization. The organizational setup will employ regional chairmen as well as a national one. An added advantage of this type of organization is that regional chairmen can be groomed to assume the national chairmanship which in DAVI assumes increasing importance. Official announcement of the national and regional chairmen will be made in the September issue.

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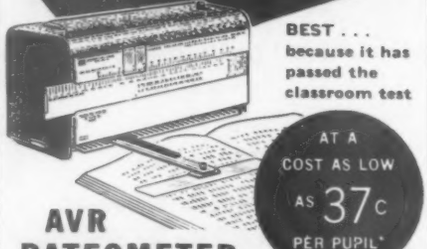

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Other themes planned for the coming year are (tentatively): November, *Teacher Education;* December, *Instructional Materials Centers;* January, *Historical Perspectives;* February, *The 1960 AV Director;* March, *open;* April, *AV and Individual Differences;* May, *Forces Affecting AV Use.* Suggestions or articles fitting this schedule will be welcome. Manuscripts have already been solicited for the September issue on interpreting the school story through AV.

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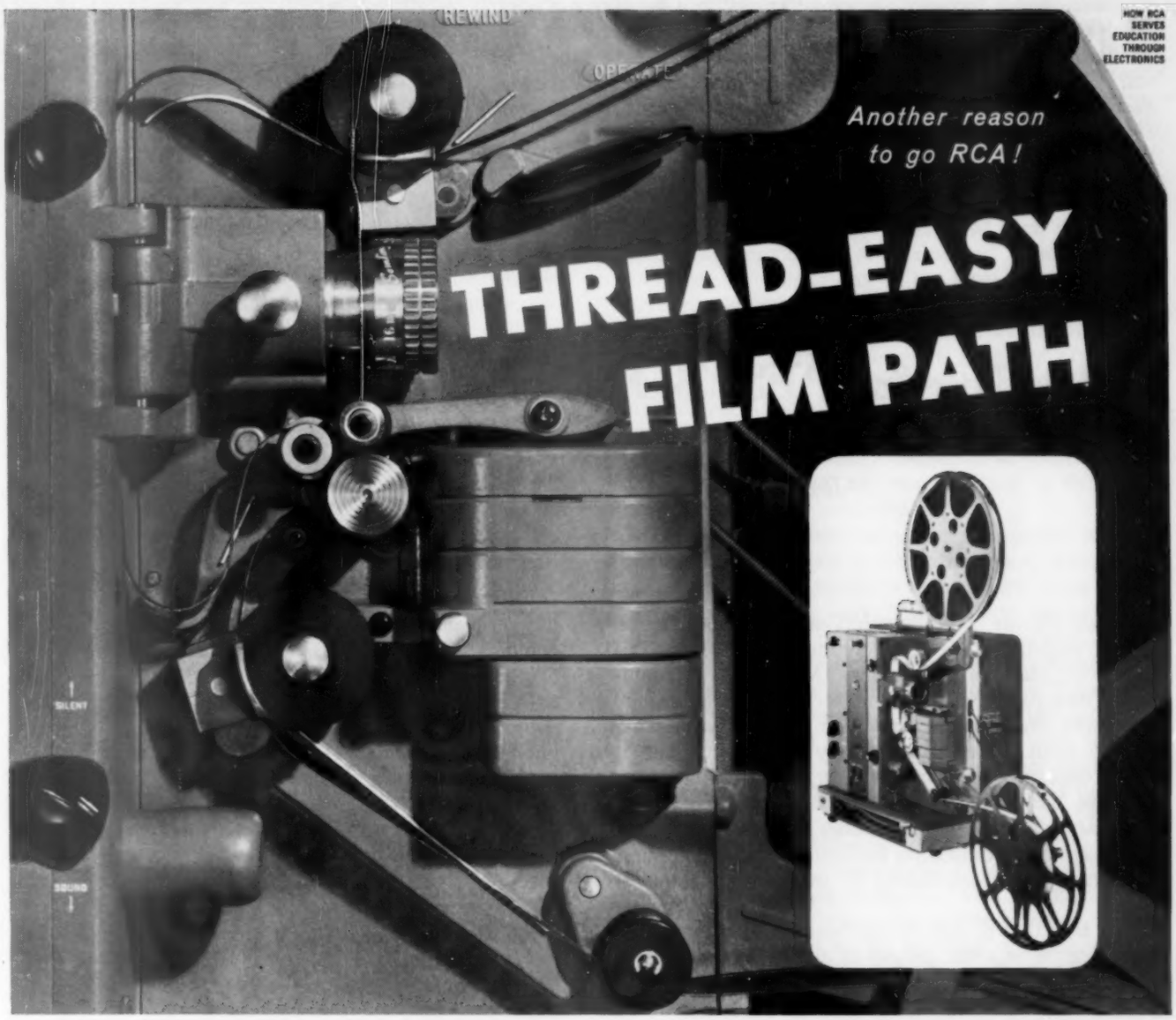

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The audiovisual specialist, everyone knows, is a busy person, and the AV Center a hive of activity. Perhaps this is what Dr. Hyer has in mind on page 160 when she advocates periods of "standing still." The articles in this issue offer hindsight that should expedite the kind of "planning ahead" Dr. Hyer is talking about. And who should better introduce the series than Ray Wyman whose planning is farther ahead than most?

SPACE & PERSONNEL / *Some New Concepts*

Raymond Wyman

WHEN HENRY FORD revolutionized the production of automobiles, the revolution cut across practically every phase of the business. Many of us in audiovisual education feel that our technology can in the same way revolutionize education, but not within the existing strait jacket. I personally believe that audiovisual educators are making a big mistake by trying to adapt the technology of education to an inherited and now archaic type of classroom and schedule. Even in this age of specialization we assume that a classroom teacher in one room should do everything for everybody.

It is true that education has begun to move towards specialization in some sectors as evidenced by our TV teachers, audiovisual specialists, teachers aides, language laboratories, etc.—but much more needs to be done. In an article in the January 1959 AUDIOVISUAL INSTRUCTION (page 20) I proposed a radical change in the school day and school year to enable teachers to utilize audiovisual techniques effectively. Now I would like to propose an equally radical change in school structure and personnel for middle grades through college to match the schedule I proposed then.

There seem to be three distinct phases of the total educational process for which special areas and special personnel should be provided. One part is the presentation phase. This is essentially one-way communication between the instructor and his students during which the facts are given, the process demonstrated, the construction diagrammed, the incident dramatized, and so on. It is of minor importance in the first few grades, but probably accounts for a third of the time spent on education as the children mature.

A second part of education might be called the reflective study phase. This is essentially internal or individual communication. No teacher is necessary although one should be available occasionally for help. This is the part of education known as homework (but better done in school)—individual drill, reading, thinking, problem solving, trial and error, etc. It is now most commonly done in a classroom or at home.

The third part is the interaction phase. This is essentially two-way communication between teachers and their pupils, between pupil and pupil, and between pupil and materials. This is the "social living" part of education including discussions, debates, question-and-answer periods—the phase in which one learns to work with a group. It also includes the supervised performance part of education usually called laboratory experience and some parts of the testing program where the teacher is trying to determine educational growth.

All three parts of the total process are essential, and where students have mastered self-discipline and the tools for learning, each part accounts for about a third of the total time spent on education.

The presentation phase is the part that is best done with the many aids to communication called audiovisual materials. With these, the skilled teacher can present facts, processes, illustrations, and relationships very quickly, clearly, and with permanence. He can get and hold the attention of students. He can save time in teaching. Many teachers do not use audiovisual materials in their classrooms because the physical arrangements are not convenient or even possible, they have no time for preparation and cleanup, or the group is so small it does not warrant the extra work involved. (Someone has described the present system as repetitive decentralized instruction.) Most classrooms are also too filled with distractions for good presentation. In an effort to provide an interesting visual environment with bulletin boards, exhibits, pictures and window walls (wide screen movie all day), we have inadvertently provided an area for presentation in which concentration on essentials is very difficult.

Professor of education at the University of Massachusetts and chairman of the DAVI Television Committee, Dr. Wyman is a frequent contributor to AVI.

The presentation phase can be effectively achieved with large groups at one time if appropriate equipment and suitable rooms are used. Some research seems to indicate that approximately 30-minute periods are most effective.

The study part of education now takes place in classrooms, homes, and study halls or libraries. Some homes have good study areas for children, but most do not. Practically every rule for good study is violated. The details are too well known to need enumeration, but the fact is that every child does not have equal educational opportunity at home. A better environment for study would be a specially constructed area under the guidance of a special person. Many study halls in schools appear to be storage rooms rather than study places for children; they are often makeshift arrangements supervised by teachers who need and wish to be doing something else.

The interaction phase of education (interaction between people) seems to generate more easily in a group of about a dozen. The typical class of 30 is far too large. A large table in a conference room is often a more favorable setting than a general purpose room. The laboratory part of the interaction phase requires special equipment and a special room. This is necessary for music, art, foreign language, home economics, science, typing, etc. The number of units and the size of the room would be determined by the number to be taught at one time.

In constructing new schools, special areas should be built to house most economically and effectively the three different phases of the educational process. Presentation areas should be constructed to accommodate about 120 students at a time during a succession of half-hour sessions. No windows, no bulletin board, no exhibit case, no pictures on the wall, no chalkboard. Comfortable chairs and writing surfaces would be provided. Air conditioning might be desirable in some areas. Good ventilation would suffice in others. A lecture demonstration table for the teacher would include an overhead projector (rather than chalkboard), sink, sound control, light control, projector control, etc. Four TV sets would probably insure good viewing for all students during televised presentations. Slide and movie projectors and tape machines would be ready to go at any time, not only for a substantial segment of the lesson, but also for very brief illustrations. A high fidelity PA system would make lectures easy to give and listen to. Lighting would be instantly variable from full brilliance to complete darkness. The walls would be perfectly plain and the whole room as free from distraction as possible.

Special study areas with desks or tables and chairs should accommodate 120 students. Good acoustical treatment would minimize noise. Plenty of reference materials would be available. Students would be expected to prepare all assignments in this area, with the possible exception of book reading. Upon leaving school they would be practically free from school work. Pleasant and comfortable but not elaborate or expensive surroundings would be required. The school library should adjoin.

A large part of the interaction phase would take place in small conference rooms with a large table, 12 chairs, a chalkboard, bulletin board, flannel board, etc. Expensive and complicated laboratories would be required for each of the special individual performance laboratory subjects. However, the lecture demonstration part of these courses could be less expensively given in the presentation rooms. Probably a succession of two to four half-hour sessions combined would be best for this phase of education.

A specialist would be in charge of each part of the educational process. The "presenter" would teach a few large groups per day in the large rooms designed for that purpose. His education and ability would be similar to that of the studio teacher on television. In large cities or metropolitan areas he might often work from an ETV studio sending the lesson out to several presentation rooms. He would be a master teacher both in subject matter and in ability to inspire and communicate. He would command a special salary. (We could promote our best teachers to this phase rather than to administrative jobs.)

The presenter would have non-professional technical and clerical assistance to take attendance, prepare materials and operate machines as necessary. Some presentation sessions using only films or TV would be entirely in charge of these non-professional assistants.

Study areas might well be in charge of college-graduate housewives who would want to work a few hours per day without preparation duties or other outside assignments. Retired persons might also want this type of work. Maintaining a good study atmosphere would be the primary requirement, and pay would be by the hour.

The interaction phase of education would be handled by teachers of the caliber now associated with public schools. They would be familiar with the material presented to the large groups and would question, discuss, illustrate, and check on the material as necessary. This teacher would assign and check on all outside reading, writing, and so on. With only a dozen students for hour or half-hour periods, intimate contact could be assured and student work really evaluated.

This team of people, professional and non-professional, would work together under the guidance of the principal to provide the best possible education. It seems doubtful that the present "supervisors" would fit into this program. Most audiovisual materials would be conceived or selected by the presenters and handled by a technical assistant who would also work with the area audiovisual center.

About the same number of people would be required to teach a given number of students as in the present school organization. Some of them would receive considerably higher salaries than present teachers, some would receive the same, and some less. The new buildings would be less expensive due to large amounts of inexpensive construction and smaller amounts of expensive construction and equipment. Conference rooms could have relatively low ceilings. Presentation rooms should be higher, but without windows, and they could be in the center of buildings. All of these facilities could be used by two shifts of students on a short day and long year as expounded in the previous article.

5 ESSENTIALS IN A LARGE CITY PROGRAM

C. E. Costley

TO LAUNCH AND ADMINISTER a successful audiovisual program requires vision and leadership coupled with confidence in the effectiveness of audiovisual materials to enhance learning. Essential to the success of such a program are: (1) a sympathetic and understanding administration and board that will give adequate moral and financial support, (2) well-trained personnel, (3) careful evaluation and selection of equipment and materials, (4) adequate housing space, and (5) maintenance and distribution of materials.

Oklahoma City has been fortunate in having boards of education committed to the philosophy of "meeting the instructional needs of all the children of all the people." They have maintained a consistent attitude of confidence in and support of our audiovisual program. They have sought information from reliable sources and have made a significant contribution as liaison between the schools and the community towards acceptance of innovations and experimental programs such as the introduction of modern foreign languages in our elementary schools. They have encouraged experimental activities that could be studied, evaluated, and utilized for improvement of instruction in many areas. Our television teaching has been possible because of the unqualified support of an informed board. An increased budget has been approved almost every year for the support and expansion of our program.

Our superintendents and curriculum directors have been men and women of vision who have worked in close harmony with their immediate associates and our boards in an all-out effort to meet the needs of an "exploding school population." They have been responsible for fostering, even demanding, the improvement of classroom teaching complemented by television instruction. Because of the support and cooperation of the boards of education and our administrators, we are able to offer a vast array of materials, supplies, equipment and services from our Materials Center "Supermarket" to Oklahoma City's teachers of 60,000 students. To assure the most effective use of these materials, the Center provides a constant follow-up of publications, counseling, and services to the classroom teachers. This aid from the department of instruction fosters wise and effective utilization of our services and materials.

A prime requisite for the development of a successful audiovisual program is a highly qualified staff with a well-grounded belief in the efficacy of materials in improving instruction. Our staff has been carefully chosen. All have been teachers or administrators of proven worth and most have master's degrees.

There has been a continuing inservice training. Advice has been sought from many sources and there has been careful study of successful audiovisual practices in other cities. For example, in 1956 a survey team sponsored by the DAVI Field Service spent a week in an evaluative study which has proved valuable to the department and to the system.

The summer workshop of June, 1959, brought 27 educational leaders from many of the outstanding edu-

---

The author is director of the Teaching Materials Center for the Oklahoma City public schools. He was a contributor to the January issue devoted to the National Defense Education Act.

cational institutions in the country to act as consultants to the more than 600 teachers who attended. Without exception, these consultants made wide use of audiovisual materials and thus demonstrated the effectiveness of these aids in various instructional situations.

By these inservice efforts, we have developed a team well informed and adept at working with teachers, administrators, and students in an audiovisual program that touches every classroom in our system.

Directly associated with the director and responsible to him are: (1) a supervisor of audiovisual materials of instruction, (2) a film librarian, (3) a supervisor of educational recordings, (4) a curriculum librarian, and (5) a textbook librarian.

The supervisor of audiovisual instruction helps in the selection of equipment and works with teachers and principals; he supervises equipment such as screens and language laboratories and is in charge of administrative photography. (The latter involves making pictures as requested by heads of departments for the dissemination of information.) He is also responsible for making colored slides related to units of work.

A film librarian is responsible for the selection and accessioning of films; he works with committees of principals and teachers in previewing and selecting films for purchase; he is responsible for maintenance, repair, and distribution of films and recordings; and he makes available, to the administration and board statistics on the utilization of audiovisual materials.

A supervisor of audiovisual recordings works with teachers and students in finding and designing educational experiences through recorded media with special emphasis on tape recordings and is available as a consultant in making and utilizing the latter. Through his association with World Tapes for Education the school system benefits from tape exchanges with 21 foreign countries.

Books are definitely a part of the audiovisual program in the Oklahoma City schools. The occasion is a shipment purchased through NDEA funds.

A curriculum librarian is responsible for exhibits, graphics, flat pictures, globes, maps, periodicals, books, and all other publications for the department. He circulates loans of these materials to schools, maintains displays of available book selections and acts as an advisor to school librarians.

A textbook librarian orders all textbooks, both those provided by the state and the board. He maintains displays of textbooks and acts as a consultant to teachers and committees examining them. He also maintains a record library for circulation in the schools.

The best equipment to select for purchase and the method of choosing it is one of the most variable features of audiovisual programs in many school systems. Standards of performance have served as a guide for our selection here, but in the past many items have been furnished by PTA's and other interested groups. To counsel with and hold the confidence of these groups has required the acceptance of some equipment below our specifications. However, we now have a systematic plan of purchase and replacement approved by the administration and the board. Under this plan, mass purchases are by bid, and only those models or makes which meet our written specifications need be accepted. Individual school and club selections are usually purchased under the extension of the most recently accepted bid. This has brought about an improved selection by these groups since they profit by purchasing through the bid from our central office and respect our counsel in making selections. Keeping a high standard of performance as a criteria for the selection of equipment is of great importance because so much audiovisual material is used in our instructional program.

For the past three years, the Ford Foundation has contributed to a project which has involved four large elementary schools, team teaching for large classes, and teaching by television. There have been gratifying results involving our audiovisual program. Many rooms have films, filmstrips, and projectors for daily use. All large classes in the experimental schools have public address systems. A number of teachers are using overhead projectors very effectively.

Television teaching is now an established part of our system of instruction. Although the television program is under the supervision of the curriculum director, the Center supplies much audiovisual material for this method of instruction.

Equally as important as the selection of equipment is the careful previewing and evaluating of materials for our audiovisual program such as films, filmstrips, records, etc. In the beginning, materials were selected on the recommendation of preview committees meeting at the Center. These committees represented the various grade levels, subject areas, and specialized programs. With the expansion of our audiovisual program, previewing films has been greatly augmented. While we maintain a previewing room at the Center,

(Continued on page 148)

BLUEPRINT FOR A SMALL CITY SYSTEM

R. A. Frye

City:	Roswell, New Mexico
Size:	Approx. 45,000
Students:	Approx. 10,000
Facilities:	1 Senior High School 3 Junior High Schools 13 Elementary Schools

IN ESTABLISHING an audiovisual program for the Roswell City Schools a definite procedure was set up and used, to wit:

Surveys: Principals, administrators, and teachers were asked what sort of services they would consider advisable. Inventories of all AV equipment were made and consolidated. A complete list of all projectionable materials (mostly filmstrips) was made. Surrounding communities were visited and questioned as to their activities in this field. Inventories were taken of all maps, charts, and globes.

Initial Report: Based upon facts established through the above activities a report was issued to the superintendent and board of education indicating the following: (a) The faculty desired certain audiovisual services which were not available; (b) No school in the system was adequately supplied with AV equipment and there was great confusion as to what was required, how much, and of what kind; (c) There was no uniformity as to types of materials used, and quantity varied greatly from school to school; (d) The consensus among faculty members was that an audiovisual program would be used if established.

Recommendations: The report concluded with these recommendations:

1. An audiovisual director should be given, to start with, two or three periods of free time to set up an AV program, and as the program expands, the free time should increase until he becomes a full-time worker in this area.

2. The AV director should establish a standardized purchasing program for equipment, maps, charts, and globes. He should be given a budget to implement this program.

3. He should place all school-owned filmstrips in a central file thus increasing the number of titles available to each teacher.

4. He should set up, for both elementary and secondary schools, a film rental program.

5. He should establish a delivery system for these materials.

6. He should assume responsibility for repair and maintenance of AV equipment.

7. He should become a member of the superintendent's staff to act as an advisor on AV matters and establish such further activities as might seem practical and necessary.

AS A RESULT OF THE ABOVE REPORT and recommendations the audiovisual department was established. A small budget was set aside for use of the AV director and he was given several periods of free time. At the end of the first year the following services were established:

A filmstrip file: By phoning the audiovisual department a teacher could have filmstrips delivered for one-week loan periods.

Film rental program: All teachers were advised that monies for film rentals were available and would be used to fill requests as received. These films, upon arrival, were delivered to the schools and picked up when ready to be mailed back.

Purchase of projection equipment, maps, globes and charts was begun on a limited scale.

Inservice training was limited mainly to projectionist clubs in the secondary schools.

Information: Publication of an AV digest became a monthly feature with available film and filmstrip lists included.

Roy Frye is audiovisual director at Roswell, New Mexico, and DAVI membership chairman for his state.

EL CAPITAN ELEMENTARY SCHOOL. One of Roswell's two windowless schools designed by Frank M. Standhardt, AIA. Among AV advantages are: (1) Light control—no glare, instant darkening, far less eye strain; (2) Heat control—year-round air conditioning; (3) No exterior distraction—playground activities do not disrupt classroom; (4) Little or no dust problem; (5) Use of four walls—far more bulletin, display, and chalkboard space; (6) Reduced allergy problems; (7) Lower maintenance cost—window washing, breakage, etc. Of these perhaps the most outstanding advantages in the Southwest are light and dust control. Claustrophobia does not seem to be a factor. With competent designing the feeling of closeness is almost nonexistent. People touring buildings leave without realizing lack of windows. Broad hallways with bubbles and glassed-in entrances give bright, sunny effect. Each building is equipped with emergency lighting in case of power failure.

Because of the success of the program the services of the audiovisual department were expanded the second year to include a picture file. The file contained a series of dry-mounted pictures designed for use as units. More than 15,000 pictures were thus dry mounted, totaling over 1000 units, and individual prints and pictures. These units were eventually distributed to schools in the system. The dry mounting was done by student assistants working after school and on Saturdays.

As the job of the director became more time-consuming it was necessary to discontinue delivery service to schools. Each building appointed a coordinator (sometimes a principal, sometimes a teacher) who now visits the administration building two or more times weekly for the purpose of picking up and returning materials. The elementary film rental program was abandoned in favor of the purchase. This meant a drop in the number of films used per year since only a limited number could be purchased. However it has resulted in more effective use of films. Films for this program are purchased on five-year payment plans. As soon as one contract is completed, another is started. The goal is a basic elementary program of about 600 films.

CURRENTLY THE AUDIOVISUAL DEPARTMENT offers these services:

Inservice Training Program: At least two courses are offered yearly for graduate and undergraduate credit. These courses are taught jointly by the AV director and Eastern New Mexico University at Portales. They are conducted principally as lab courses—five full Saturdays in a local school building—with some assignment and research work.

Planning: The AV department contributes to overall school planning by preparing charts, graphs, and slides for administrative personnel. Typical assignments are: a series of slides on a current bond issue; charts on the curriculum; and a preliminary layout of a language laboratory for consideration by the school architect.

Films and Filmstrips: A good-sized elementary film library and a large film rental program for the secondary schools. (Film showings in 1958-59 reached 2600).

Experimental Research: This consists entirely of tryouts of various kinds of equipment and materials in one or two schools. (Light-boxes, tape recorder-earphone combinations for remedial arithmetic, etc.)

Local Production: With the addition of a darkroom

for audiovisual use we have begun some production for classroom use. For example we are currently producing a series of 8x10 transparencies for social studies classes in the fifth and sixth grades. Charts, maps, and graphs have also been produced for classroom use.

Models: Space for models is severely limited, therefore this aspect of the program is still small. However, the number of models is rapidly increasing through use of Title III funds.

Tape File: Also limited, this file will be expanded as inservice training prepares more teachers for proper tape use. Tapes will be purchased, reproduced whenever this is permitted, and distributed to the various schools for their files. Currently there is a small tape file in the central office.

Information: Audiovisual catalogs, bulletins, supplements, and reviews are constantly distributed.

Public Relations: Activities in this line consist of speeches to PTA and civic groups; newspaper articles; and introducing civic and religious groups to the use of audiovisual materials.

Maintenance and Repair: As more equipment is added to school inventories it becomes increasingly difficult to maintain it. Repairs are accomplished by local concerns, this being considered more economical than hiring a fulltime repair man.

THESE are present difficulties:

- Because of a rapidly expanding school system (doubled in size in ten years) it is difficult to keep up with equipment and materials purchases. The AV budget must constantly be revised and enlarged expenditures justified.
- In the southwest where the sun shines virtually every day of the year light control is a first-class problem. For buildings with large amounts of glass, light control is expensive and progresses slowly.
- With the establishment of a course of study, problems arising from the use of films and filmstrips increase greatly. Use of the central filmstrip file, for example, is difficult when the needs of teachers coincide. This has been partially corrected by cutting loan time for school-owned films and filmstrips from five to two days. Eventually, however, it will be necessary to establish small basic filmstrip files in each elementary school. (This has already been accomplished in the secondary schools.)
- Lack of storage and display space continually hampers the audiovisual program. An audiovisual or curriculum materials center is clearly desirable for a school system of this size. The administration is aware of this need and will take necessary steps as soon as practicable. Such a center should include provisions for darkroom facilities and teacher production facilities.

AMONG FUTURE IMPROVEMENTS are plans currently underway to establish two language laboratories in our senior high school. With the steady addition of equipment it will soon be possible to complete equipment purchases and to consider new items which may be desirable. The film and filmstrip files are constantly expanding and the purchase of duplicate prints will soon be possible. Our inservice training program is making itself felt with remarkable improvements in teaching techniques and visual presentations.

Finally, the decision by the superintendent and board of education to build two windowless elementary schools (which are now completed and in use) points to a remarkable understanding of many new educational problems. These buildings resolve virtually every audiovisual facility problem. Perfect light control and excellent acoustics, along with a considerable increase in bulletin and display space make teaching with AV techniques and materials a pleasure. Other such installations are planned for the future.

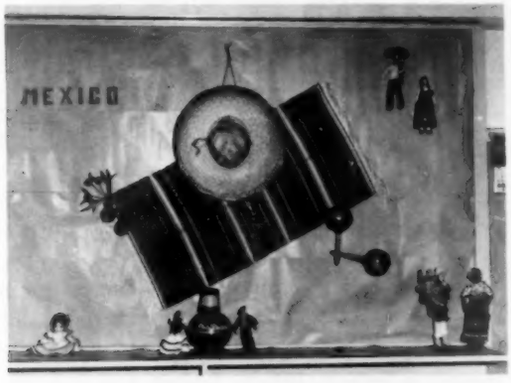
Blueprint in Brief

1. Appoint one person to be responsible for research and planning.
2. Conduct surveys to determine audiovisual needs.
3. Complete inventories of all facilities, equipment and materials.
4. Establish a small budget for the first year. Go slowly in the initial stages.
5. Establish good public relations with faculty and community. Let everyone know what is planned every step of the way. Ask for support.
6. Work first toward establishing standard minimums in equipment for each school.
7. Set up inservice training program. (Essential)
8. Consult such authorities as Edgar Dale (*Audio-Visual Methods in Teaching*) for information on scheduling, routing films, filmstrips, etc. Difficult problems may be cleared up in part or in whole by consulting DAVI research.
9. Do not set up obligatory use requirements. Let teachers learn to use materials at their own pace.
10. Keep superintendent and board fully informed as to progress. Let them see frequent charts and reports on the effectiveness of materials. If possible run controlled programs in several different schools. Use a testing program to show increased effectiveness. Stress economy of centralized planning. Audiovisuals will sell themselves to the superintendent if enough accurate facts are presented.
11. Tackle basic problems first. Find out what teachers really want and give it to them. Usually this will include lettering systems, picture files, bulletin board techniques—devices which can readily be used in the classroom. Work from this point into more complex programs.

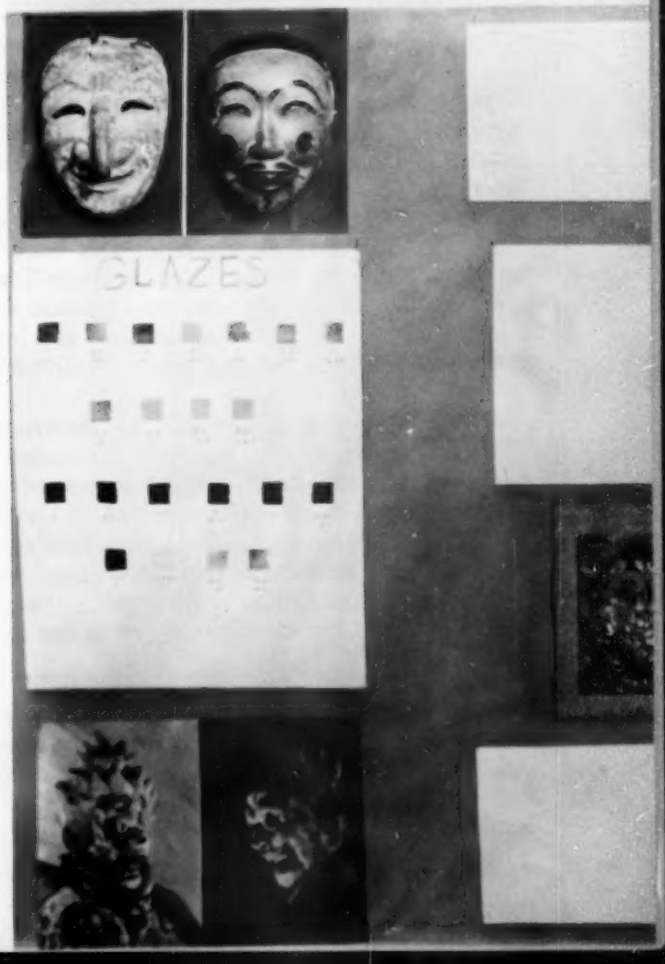
The red eyes of the skeleton light up as the correct answer is touched on this unusual question board. The demonstrator is Jerry Fairly of Chaves County Schools.

Photo above gives some idea of materials needed for an AV graphics course. The inservice program at Roswell consists of: AV workshop (1 hour undergraduate); projected materials (3 hours graduate and undergraduate); advanced graphics (3 hours graduate and undergraduate); and for the first time this year a course in audiovisual administration.

At left: This class at ValleyView Elementary school has constructed a large-scale map for a unit on Latin America. As the study progresses so will details on the map which is a paper overlay on the chalkboard.



Social studies display in ValleyView Elementary School plays up Southern neighbor. Displays change with units.



Art exhibit illustrates care with which bulletin boards are planned.

Wesley J. F. Grabow

THE MINNESOTA APPROACH

WE IN THE Audio-Visual Education Service at the University of Minnesota believe we have developed a fresh approach to utilization of classroom materials on the college level. True, many of the things we are doing and even the program we are installing may be in process at other institutions, but for our particular situation and problems we feel that our program is unique and warrants discussion.

In essence we are attempting to eliminate most of the reasons for non-use of AV materials and techniques (see p. 149) and to increase the effectiveness of the user. Along with the wide range of responsibilities of our Service a demand has grown for guidance in the proper selection, utilization, and production of materials and equipment. This function has developed into a line of communication to the faculty and staff of the University. The expansion of this area of audiovisual and communication guidance is actually the beginning of what we call the "Minnesota approach."

In expanding the guidance function of our Service we felt a real need for space—a laboratory where the faculty and staff could meet to study, experiment with, and produce instructional materials. This physical location would be the focal point of our guidance and missionary work.

The original laboratory measured approximately 105 square feet giving us a very small working space and storage for the instant copy and diazo equipment. Having this space, inadequate as it was, we were over the first hump. This was approximately two and a half years ago. Today our physical plant is equipped and plans are set for operation. The original laboratory is now a preview room attached to the "seminar-laboratory," and the entire layout measures 634 square feet. It is divided into three sections—a preview room; laboratory area including a small darkroom; and the seminar area. The preview room is equipped to project films, filmstrips and slides and to play back tapes at all times. This equipment is permanently kept in the room. Other equipment can be obtained from our equipment pool or laboratory-seminar area on a moment's notice. Eight persons can be comfortably seated in the preview room.

The laboratory area with its small darkroom is the heart of the Minnesota approach. Convenience is the key word—with materials and equipment of all kinds at the fingertips of the experimentalist. A faculty member must be shown that, when the proper equipment, materials, and techniques are used, instructional materials production is not as complicated as purported to be. Individual participation in production results in an appreciation of the material involved as approaches are developed that only the faculty members can recognize. Adequate counter work space with water supplies is provided in the laboratory area. Equipment is available for the diazo process, the instant copy processes, the polaroid copy, reflex photo copy, photographic copy, and graphic art techniques. The entire Service stands ready to supply what is not available in the laboratory. Supplies such as foils, papers, inks, films, etc. are kept in adequate quantities.

The seminar area is equipped to handle 12 persons comfortably. All types of audio and projection equipment are available for seminar use and to enable immediate trial and evaluation of materials produced. This section is built not only for talk, but also for action. It will also serve as additional work area when needed. In our concept, making the projects meaningful will be achieved basically by "doing" or by direct demonstration practice. The seminar area has six trapezoidal tables to permit flexibility of room arrangement. Available also in this room will be texts and periodical materials plus a file of other needed information such as catalogs, manuals, and so on.

We plan to operate in five functional areas in the materials laboratory-seminar. The first is *materials evaluation*. This operation will provide a central location for the collection of materials and the needed personnel to organize it for staff and faculty evaluation. The materials can be such items as maps, films for our specialized campus film library, new audiovisual devices—in fact anything that can be classed as an instructional material.

The second functional area is the *self service production of materials*. This again can be any instructional material. Slides, foils, flip charts, strip tease charts, motion pictures, almost anything the faculty wants to produce for use in the learning process. The Minnesota concept professes that to appreciate instructional materials you must be familiar with them and this is accomplished mainly through handling and, better still, through actual production. For example, a motion picture film clip produced by a staff member is sure to be used effectively for he knows its purpose and recognizes its limitations.

Along with the involvement factor to insure more effective utilization is individualized production. The instructional materials are designed to complement the teacher's talents, not to standardize a method of presentation. Two teachers giving the same course may very well use altogether different types of materials for they are properly using techniques fitting their native abilities. We wish to encourage effective utilization by producing materials that will make the most of a particular faculty member's aptitudes, even to the extreme of eliminating those audiovisual crutches that act as road blocks to a gifted orator. Remember, we are faced

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Director of the Audio-Visual Education Service at the University of Minnesota, Wes Grabow contributed a guest editorial to this magazine in April 1959.

with developing tools for the three learning outcomes—skills, understandings, and attitudes. In teaching skills we have had some success in standardizing method, for we learn through repetition and practice, but in dealing with understandings where we use problem solving, and attitude formation where we affect emotions, the best teaching method will vary from teacher to teacher.

The third functional area is *research in new techniques and materials*. This again can very well run the gamut of instructional devices. Already we have designed models, electronic devices, materials for television instruction, new uses for communication devices such as those employed in dramatic presentation, and individualized material such as foil overlay, flannel graph, or what have you. These are instructional problems where there should be a meeting of minds—the "method" mentality and subject-matter oriented—to produce the most startling results.

The fourth functional area is *new service development*. This is a stop-gap function. Where a production service is not provided, the laboratory will take over until volume warrants a special service. The laboratory seminar should and has already developed needs for new services. Among early laboratory explorations were instant copy devices such as Verifax, Copease, and Thermofax. Students originally wanted pages from books copied for inclusion in reports. Today, after several years in which the demand developed to sufficient proportions, a special instant copy service is operating under our main service. The laboratory is still mass producing diazo and transferon foils. Soon production will reach the volume or stage where we will have to provide specialized services for this material. Industry calls this practice "product or service development."

The fifth and last functional area is our program of *inservice training*. We are set up to handle any size group that desires an inservice training program. Where we need larger facilities we can use our studio or classrooms, but we honestly believe that the most effective work is accomplished in the smaller groups. In fact the Minnesota approach is founded on the importance of a strong single convert who will in turn be the best missionary in spreading the message of effective communications in the classroom. One person sold on using good teaching tools is our best salesman. There-

(Continued on page 149)

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1 *Functional Area One: Materials Evaluation*

2 *Functional Area Two: Self-Service Production of Materials*

3 *Functional Area Three: Research in New Techniques and Materials*

4 *Functional Area Four: New Service Development*

5 *Functional Area Five: Inservice Training*

THE FINISHING TOUCH—Artist Kalmon Erdekey uses an airbrush on a poster for the home economics department. Graphics are a part of the daily service to faculty and administration. The Center also provides a more limited assistance in preparing models and other 3D materials.

CONSULTATION SERVICE—The Center's director, James S. Kinder (second from left), consults with three faculty members. Close relations with college departments are fostered through official liaison—an AV representative in each department who correlates departmental needs. Requests increase yearly.

SPACE FOR EVERY SERVICE, every storage, every display. Shown above is a 3D model of the Center's floor plan. Note office space for two administrators and two secretaries; suite for photography; graphics room; recording and dubbing rooms; maintenance and repair shop; 3D room; large conference or demonstration room; preparation room; three preview rooms; three listening rooms; miscellaneous areas for storage, checkout, etc.

THE MAN AT THE HELM —James S. Kinder is co-author of *The Audio-Visual Reader* with F. Dean McClusky and author of *Audio-Visual Materials and Techniques*, both well-known volumes in the AV field.

STUDENT OPERATORS—At right, Hayden Smith, the Center's No. 2 man instructs two of the Center's 25 student operators in procedures for checking out films and equipment. Operators and equipment are available for projection of films, slides, stereos, filmstrips, audio recording and playback of pre-recorded tapes and discs. ABOVE, REMEDIAL CLINIC for chi.dren with speech and hearing problems. The Center works closely with such campus services as the reading and speech clinics, closed-circuit TV, and language laboratory.

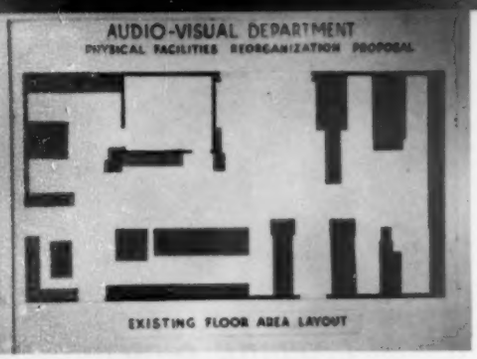
a pictorial record of a fast-growing center

SERVICE / *at San Diego State*

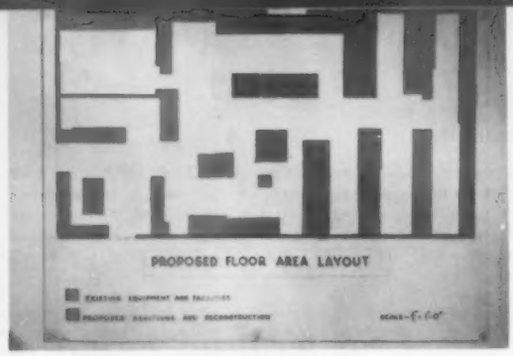
TO MEET A NEED—In 12 years the audio-visual center at San Diego State College grew from 1200 square feet to 9000; from one full-time and one half-time employee to a staff of 11; from an inventory of a few hundred dollars to nearly $200,000; from a few hours of service per day to a 13-hour schedule (8 a.m. to 9 p.m.). The Center which moved into new quarters in 1959 now serves a student body of 10,170.

PHOTOGRAPHER—At right is Joe Rinteria whose photography adorns these pages. The San Diego Center furnishes photographic services to faculty and administration. It also produces slides, filmstrips, and motion pictures to departments in limited quantities. Expansion of the latter service is planned.

FACTORY TRAINED TECHNICIANS—Wallace Spencer (left) and assistant, Carl Spears, maintain and service all AV equipment, whether or not on the Center's inventory. Equipment is checked twice yearly regardless of outward condition. Standby equipment is maintained in a central location and is supplemented by an equipment cache in each building.



I Layout of Floor Area at Outset



II Proposed Layout

III Layout Finally Chosen

IV

STREAMLINING YOUR S

Maurice C. Williams

I NEVER DREAMED that one of those "horrible educational quirks" would pay off so generously. Some years ago, as a result of taking a few business courses, I was assigned to teach bookkeeping, accounting, and general office practice. A year ago I was faced with the task of fitting an already "bulging" but expanding department into the same area that had been provided for the five preceding years. Both the courses and the teaching experience saved the day.

Here is a brief outline of what we did. First, may I say the "we" refers to the staff of the audiovisual department in the Santa Barbara (California) County Schools. All activities were planned with the staff. Where we felt a need for additional direction we called upon the best available resource person. For instance, Joseph Knowles, art consultant for the Santa Barbara County Schools, gave invaluable service throughout our study.

The first step was quite a common one. What was the basic problem? The answer was simple. We had to obtain better utilization of the space available, simplify operation to provide better service, and organize more efficiently to provide expanding services within this space and with the same number of personnel employed for the past five years.

How were we to find the solution to these three problems. Here my business training paid dividends. Four techniques could be used to provide us with good evaluative data as well as potential answers. These were flow charts, room layouts, administrative reporting, and job analysis. Originally we planned to use each technique twice—for the existing pattern and for the new plan. We ended with a third—the actual result after a few weeks of experience. [This thought should not deter others from trying these techniques. Without them the trial and error method would have taken many more months besides being extremely inefficient and uneconomical.]

Flow Chart

In all of our activities we maintained the simplest approach possible even though such action might not always be a pure use of business practice. Figures IV, V, and VI show the three flow charts—Old, New, and Actual. The flow chart (devised to show the direction of traffic) caused us to measure off the distance traveled by each individual during a week. It further prompted us to study exactly what we were doing, the way we were doing it, and how we organized our tasks. Consequently, the flow chart did a great deal more than analyze the traffic movement in our office.

Room Layout

It is necessary to discuss room layout before finishing with flow charts because the two are completely interrelated. Figures I, II, and III show the three room layouts—Old, New, and Actual. The layout was made with little pieces of cardboard cut to scale for each major item in the department. First, we analyzed what the flow chart told us. For one thing, the office of the director was in the way. That had to go. Second, we were walking not only all over ourselves but over everywhere and too far. Third, we felt that the movement should be given a pattern.

Decisions were simple. We should, in general, walk in only one direction to an item or person and back. The shipping and receiving clerks should be able to

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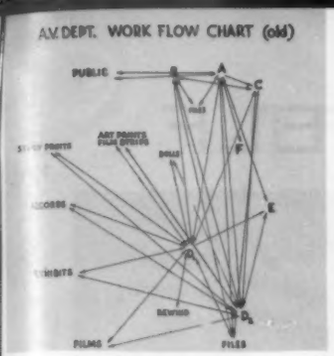
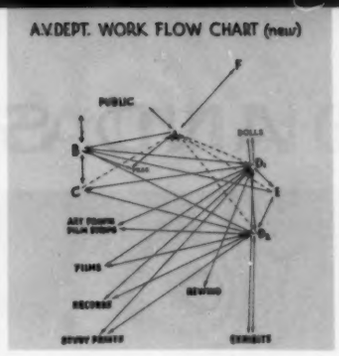
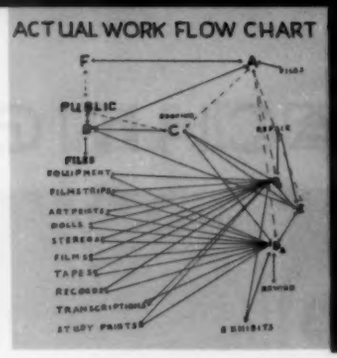
The experiences related here occurred when the author was coordinator of audiovisual services for Santa Barbara County Schools. He is currently at Clover Park High School in Lakewood (Tacoma) Washington.



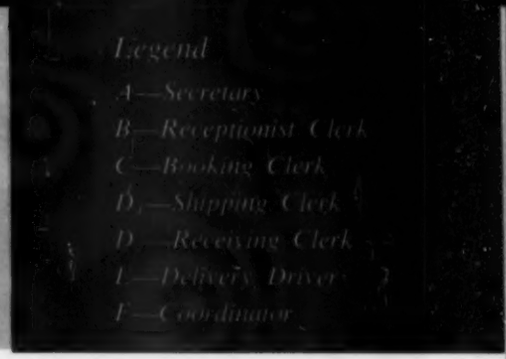
IV Work flow chart (old)



V Work flow chart (new)



VI Work flow chart (final)



R STAFF / *Application of Business Practices Brings Dividends*

make one trip out in a given direction (to a particular type of material) and back in the preparation of a given order or group of orders (morning delivery or day's delivery). This would also need to be true of the receiving clerk who returns the materials to the shelves. Shuffling the pieces on the cardboard layout began to take on meaning and was easier than moving the furniture.

The result is evident in both the Flow Chart and Room Layout. One single direction was achieved straight from the visitor's counter through the entire department. This planning done, we were forced to check reporting procedures and job assignments. Did this new procedure change relationships between personnel, change actual jobs to be done? It did.

Administrative Reporting

We became aware of the developmental process taking place. A series of secretarial changes made utilization of knowledge based upon long experience in the office nearly impossible. Nonetheless, we set about to evaluate our personal relationships and written reports. A staff conference was held each week to learn what staff members had to say about particular observations of that week. Through their comments I was able to study the relationships as well as the jobs. We all evaluated each reporting procedure, form, and purpose or reason for action. Many new forms were prepared, but the biggest and most valuable result was the number of forms and reports that were thrown out. Here we really had fun. I might add a note of caution—we threw out a number of old files that seemed obsolete. You know the result. However, I think the chance is well worth the few times one will be caught up. We have much more file space without additional purchases. We consume less file space each month than before. Yet research proves that we actually provide more information than we did before the study.

One good example of this space saving also saved us secretarial time—and therefore budget dollars. In the case of our evaluation form on preview materials, we were writing the same information four times. The new form required only one writing. We had had an excellent multiple order form for the schools' materials requests. But with expansion of services we had also to check this system. We ran a flow chart on only one booking from the multiple form, then added in red the additional "movements" for various "emergency" actions—early return, not returned, lost, destroyed, and so on. It was surprising what went on—a three ring circus. So we shifted to the single order form, one we cooperatively designed with members of a large school district nearby.

A pilot trial with selected personnel was made of all new forms planned. When one was successful, we ran a test study for three or four months with selected school districts. This was evaluated from the point of view of our office, then evaluation sheets were sent to the participating schools and results again analyzed. The two evaluations were examined, changes made where necessary, and the program put underway.

Job Analysis

From the steps just described it is obvious that a detailed analysis of each job in the department was necessary. This analysis not only grew out of the information statistically compiled but also from the individuals who "grew" with this overall program. They demanded more specific assignments and a clearer definition of tasks as well as relationships. Though naturally some negative feeling existed, the analysis changed into a group project through repeated staff meetings. Soon the emphasis was shifted to better

(Continued on page 154)

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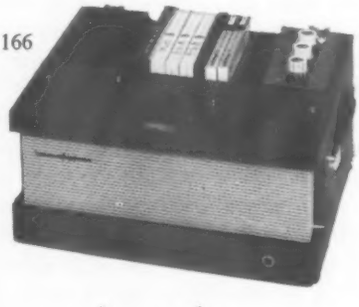
MODEL 166



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CITY _____ ZONE _____ STATE _____

Five Essentials—

(Contiued from page 135)

pilot schools also receive films for previewing. This previewing is done by committees of teachers and administrators involved in the subject matter areas where the materials are to be used. For example, the language arts teachers list their needs for films and filmstrips related to the concepts taught at various levels; the science committees have been studying carefully the selection and placement of films for elementary and junior high science films; entire film programs have been acquired for specialized subjects such as Dr. White's physics series or the Dr. Baxter series for chemistry. Since entire film series are generally used for televised instruction, consideration must be given to the selection of so-called "bit" films for other classes. These give information on single topics such as Ohm's or Pascal's Law which teachers may wish to use in individual classrooms.

The Ford Foundation and other experimental programs have necessitated adaptations to meet specific instructional needs. Too, the demand for films in color has caused changes in our budget and selection plans. There has been an increase in the use of filmstrips. Many of the elementary schools have developed extensive filmstrip libraries in the individual buildings, but it is still necessary to furnish many specialized productions at both the elementary and secondary levels. Filmstrips have proven valuable in keeping up-to-date materials available for meeting these specialized needs.

There has been a continuous expansion of the study print and flat picture phase of our program. Processing and mounting pictures is now an essential feature of our work. A workshop was conducted to encourage and instruct teachers in building their own files of these valuable aids.

Recently the National Defense Education Act has proven a boon to expansion in the teaching of science, mathematics, and modern foreign languages. The board has approved the acquisition of an extended film complement in these subjects. Plans are in progress which will provide modern foreign language films in French, Spanish, and German. Materials, films, filmstrips, recordings, and tapes have been provided to implement the Berlitz Method and the Wayne State French Program. The Spanish film production by Encyclopaedia Britannica *(Gloria and David)* has been provided for experimental use in four schools. All of the secondary schools have been equipped with laboratories or "hear and speak" language tables. Elementary language classes are being taught by television to all third grade students and elementary schools have been supplied with correlated tapes and records.

Housing an audiovisual center of this magnitude has required expansion from a one-room center with a part-time director to a floor space of 10,800 square feet in the administration building and the employment of some 24 persons.

Included in the Center are staff offices, a curriculum library, a graphic and picture display area, a film library, a recording studio, darkroom facilities, an equipment center for demonstrations and emergency loans, a preview room, and a film repair department where all films are processed with electronic apparatus and footage is replaced. Repairing films is an unending task. However, as operators become more experienced in the use of equipment, damage percentage wise has been reduced.

Television facilities are housed in a nearby secondary school to which the Center makes daily deliveries. Materials are always delivered the day before the telecast in which they are to be used. The electronic shop is in a building that houses all school shops. It requires the services of several full-time specialists as 50 percent of classrooms have television sets and radios and receive television lessons daily. Besides the daily delivery to the television studio, further distribution of materials for this extensive audiovisual program requires careful planning.

Our present delivery system requires three trucks scheduled for daily deliveries to secondary schools and three times weekly to the elementary schools. A special delivery is provided for recordings, exhibits, and equipment. This is a far cry from the days in 1946 when teachers had to pick up films on the way to their classes and return them after the day's work.

In addition to our commercially prepared materials, our department collaborates with teachers and pupils in making slides, tapes, still pictures, and recordings. For example, we have made slides to complement elementary units on *Our Water Supply, Resources Available to Oklahoma City Schools,* and *Communication.* Tapes of original songs have been made and sent to schools in other countries.

Based on a Philosophy of Optimism

Although our audiovisual program has made a gratifying expansion, there are still many problems. One of the foremost is keeping films available to meet the changing needs in many areas. The criteria for selection is close correlation with our own instructional guides. Our goal is to make the best films available and to help committees select materials by providing ample listings (both as to grade level and subject matter) as well as the actual films and filmstrips for previewing. We are looking to a future when there will be a still wider and more effective use of our materials—which will necessitate increased storage, more efficient circulation, and heavier maintenance and repair.

Today we at the Center still have faith in our products and believe that learning is a matter of perceiving and understanding, and that it is increased when supported by audiovisual materials that help show patterns, classes, like and unlike, and relationships. Audiovisual materials are also extremely valuable in their capacity for correcting wrong impressions. We are committed to the philosophy that we will try to change those undesirable things which we have the power to change, to recognize those things beyond our ability to alter, and to make the most of every opportunity to serve students by serving the instructional personnel in our school community.

The Minnesota Approach

(Continued from page 141)

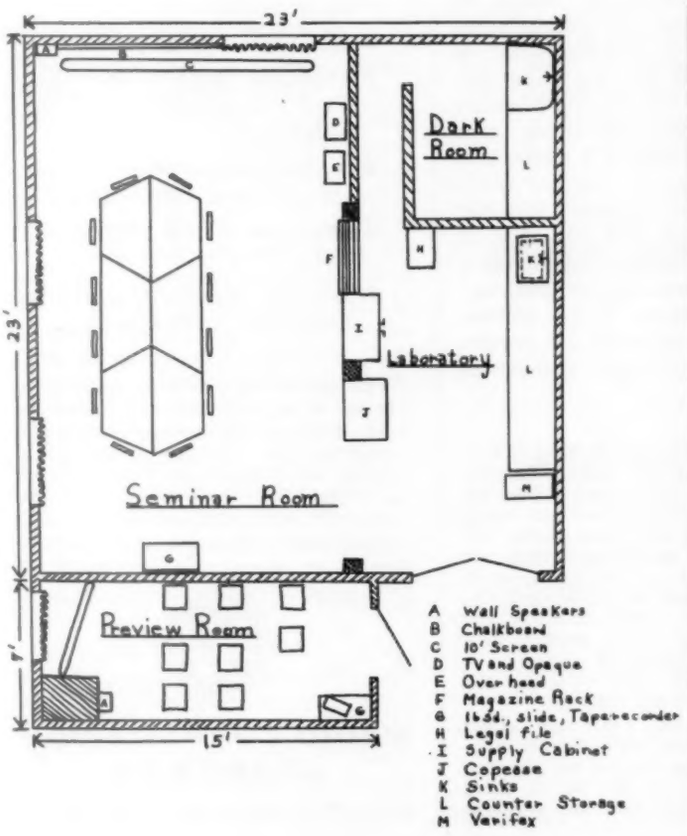
fore the majority of our inservice training will be done in groups of one to 12, and probably mostly in individual rather than multiple instruction. Standing by to assist in any of the five functional areas is the entire staff and facilities of the Audio-Visual Education Service.

The Audio-Visual Education Service at the University of Minnesota is a university service unit. Administratively we report to the director of university services who in turn reports to the vice president of business administration. We also report to an audiovisual senate committee which advises us as to the needs of the University faculty and also reports directly to the president of the University. The Audio-Visual Education Service is strictly an on-campus service. It has 32 permanent staff members and approximately 25 part-time student employees, two of whom are on a fellowship basis. Most all of our materials and services are provided at a nominal cost which includes a margin to cover overhead expense. In other words, we cross charge the budgets of other departments for the cost of the service or material, plus an overhead charge. We usually provide a service or material for a department at a lower figure than they can get it on an individual basis because of the obvious advantages of centralization and specialization. We do not discount the disadvantages of this type of organization but we do feel that we are operating at high efficiency. To help make materials and equipment more accessible to the faculty we have initiated a pre-paid plan which permits a department of the University to start pre-payment on the basis of average usage for the preceding three years. Later an average of the actual expenditure and the pre-paid figure for the previous year gives us a workable figure for pre-payment.

Our staff is partially supported out of general University funds which permits a lower cost figure plus elbow room for consultation services on a no-charge basis. The Audio-Visual Education Service has five divisions besides the general office and accounting section. These are the artists service, the engineering service, the materials advisory service, the still photographic service, and the motion picture production service. All of these divisions provide consultative services which work hand in hand with the Minnesota approach.

The goal of the laboratory-seminar activities is to gradually increase the intelligent usage of all of our audiovisual services. The aim is not only to make nonusers users; but also to keep the several sections of our Service informed and prepared to meet the dynamic needs of the college classroom. We feel the Minnesota approach is one answer to more effective communications in the college classroom. College and university instructional needs are constantly changing. To keep abreast we should continuously experiment.

Large classes, new approaches for traditional areas, simpler procedures of audiovisual administration, better classroom facilities, training programs for material assistants, effective dissemination of information and ideas, challenging the instructor, production of new materials—these are some of the problems we hope to answer with the Minnesota approach.



Obstacles at the University Level

SURVEYS AT THE University of Minnesota reveal (as did those by Richard Hubbard at Syracuse) a number of obstacles to the use of audiovisual techniques in the college classroom. Some of the more important ones are given here to illustrate the "why" of the Minnesota approach.

- Lack of opportunity to explore the uses of new materials and techniques and to test them before use in the classroom.
- Lack of information about services or materials available.
- The need for more faculty participation in the production of materials.
- Lack of materials in specific fields.
- Too little time to integrate materials into the curriculum and to arrange for use.
- An unhappy or an ineffective experience with AV.
- Poor classroom facilities.
- Teacher inertia.
- Lack of understanding and appreciation of audiovisual.
- Lack of physical facilities for an AV center.
- Inadequate budget.
- Traditionalism of faculty.

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Another Firsthand Report on Soviet Education

LAST YEAR ABOUT THIS time AVI printed an account by Clarence O. Bergeson in which he reported few advances in Soviet audiovisual materials (with the possible exception of 3D materials limited mainly to science classes). Since that time the editors have had two letters from Murray Lincoln Miller disputing Dr. Bergson's viewpoint and claiming some evidence to the contrary in his color filmstrips, *Living in the Soviet Union Today* (copyright 1959 with SVE).

Now comes *A Firsthand Report on Soviet Schools* from the NEA Travel Division based on a "firsthand examination" by 64 American school administrators. This is a well-written account (prepared by the NEA Publications Division) with photography by Carl Purcell. The school administrators were fortunate to have in their company a young staff member of the NEA Policies Commission, Richard Renfield, whose linguistic abilities served to facilitate on-the-spot communication not always enjoyed by groups relying solely on Soviet interpreters.

The 64 educators report hospitable, friendly treatment and declare themselves "impressed by the confidence, the sense of direction, and dedication of many Soviet citizens." The report describes a revolutionary change in Soviet education which will be complete in 1963. "Polytechnization" is the term given to the plan which will relate education directly to practical production. The Soviet Union, says the report, is moving in a revolutionary manner toward practical work experiences for all students. Whether instructional techniques will also be revolutionized, the report declines to predict. "The predominant method," it states, "continues to be lecture, assignment, and recitation." A portion of the report describes audiovisual aids thus:

> Teachers do make use of aids such as models in mathematics and demonstration experiments in science. For the most part, they appear to add visual perspective to an otherwise verbal explanation and do not seem intended to encourage students to raise questions or request explanations of details given in classroom lectures. Only in shop and homemaking classes, where projects were described on the board or shown in a drawing, did pupils appear ever to discuss procedure with the teacher.
>
> There is a great deal said about schools' having motion picture equipment and films, but there is no evidence in the classrooms of the use of these teaching aids. Classrooms are not well

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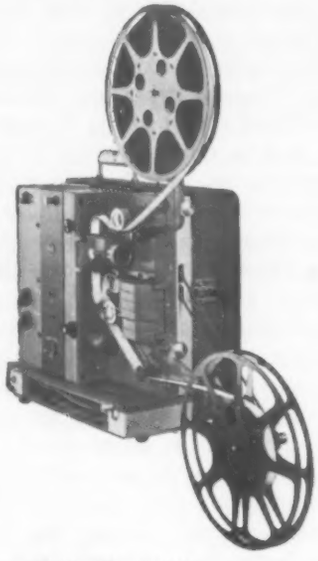

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equipped for using motion pictures, although most schools have one or more rooms, usually a science room or auditorium, which have means of light control and can presumably be used for showing illustrative movies.

Bulletin boards and pictures in classrooms are devoted more to motivational charts and general civic and cultural materials than to the specific subjects taught in the classrooms. This is particularly true of the 10-year schools. In some schools, however, in literature classes and in other classes as well, excellent displays are set up that include pictures of persons being studied and objects of significance. . . .

Though kindergartens are usually well supplied with equipment and materials which appear to contribute substantially to providing valuable classroom experience, this is not true of the other grades. In most classroom situations materials and mechanical devices are of such a nature that the pupils have the opportunity only to observe but not to use them. . . .

The special teaching facilities in Soviet schools are not unusual. In the science areas, aids and materials are equal to, and sometimes better than, those of the average American high school in a community of 25,000 or larger. No special equipment is used for teaching foreign languages. . . .

Purcell's photography alone makes this 63-page report well worth the $1 price. Write to: Publication Sales, National Education Association.

As Others See Us

The September 1959 issue of the Austrian magazine *AVISO* carries two articles pertaining to the American audiovisual field. One is a reprint of an article by Jim McPherson from the October 1957 AVI with an introductory note describing Dr. McPherson as a "young, magnetic personality who, with technical knowledge and much enthusiasm, dedicates himself to the research and spread of the audiovisual method in education."

Readers are cautioned to regard Dr. McPherson's article (*Profile Your AV Program*) "not at all as a utopian picture of the future," nor as standards that necessarily hold good in Austria. "But," states the introduction, "we can learn from the experiences of other countries and thus avoid costly mistakes in time and money."

In a second article Erich Bauer, who was instrumental in launching the magazine, gives his interpretations of the Seattle Convention in which he explains to Austrian readers the workings of the National Defense Educa-

(Continued on the next page)

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tion Act, the audiovisual field's concern with teacher education, the role of ETV, and other audiovisual concerns as they emerged at the 1959 Convention.—*from material translated from the original German by Anna Carlzon, a member of the DAVI national staff.*

DAVI Plans Session for NEA Convention

"The Classroom Teacher and Learning Technology" produced by the Division of Audio-Visual Instructional Service, NEA, will be a feature of the concurrent sessions Tuesday, June 28, during the NEA Convention in Los Angeles.

The session will portray dramatically and in capsule form new developments in the field of learning technology: teaching machines, television, massed films, special teaching kits, and audiovisual instructional systems. These devices will be presented in their classroom applications and discussed as to their implications for the classroom teacher of tomorrow. Jim Finn, DAVI president and Ann Hyer, DAVI executive secretary and director of the Division, are in charge.

Summer Meeting

The program for the DAVI summer meeting scheduled for Monday, June 27 is in the hands of a California committee with Ernestine Runner, San Bernardino, as chairman. Others on the committee are Robert Gerletti, Los Angeles County Schools; Gene White, Los Angeles City Schools; and Jim Finn. The morning meeting is set for 9 a.m. in the Galeria Room of the Biltmore Hotel and the DAVI luncheon for 12:15 to 3 p.m. in the Renaissance Room, also at the Biltmore.

With NAVA in August

NAVA WILL DEPART from traditional procedures this year to substitute a visualization of the Convention theme, "The Challenge of the Sixties," for the customary keynote address. James W. Hulfish, NAVA information director, will take viewers back through the years for a look at past accomplishments in the audiovisual field (and NAVA) and bring them up to date with prognostications.

General chairman for the Convention scheduled at Chicago's Morrison Hotel for August 6-9 is Harvey W. Marks, first vice president of the organization. A major speaker will be

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Herbert True, writer, psychologist, and lecturer who will address himself to a topic related to the Convention theme—"Meet the Challenge." The three-day program also boasts a "top demonstration team" from the West Coast: Richard B. Lewis, Tom Clemens, and Jerry Kemp, all of the AV Center at San Jose State College.

Teaching machines and language laboratory equipment are expected to be prominent among exhibits. The Annual Institute for Audio-Visual Selling, sponsored annually by NAVA and Indiana University, will be held on the University campus July 31 through August 4. John Dostal of Educational Electronics, Garden City, New York, has been named chairman of a specialized course in language laboratory sales.

Summer Calendar

A WORKSHOP on Creative Production Through Selection, Production, and Evaluation of Audiovisual Materials is scheduled for June 20-24 at San Diego State College. James S. Kinder and Clarence E. Fishburn comprise the workshop staff. Visiting consultants will be William Sanborn, San Francisco Unified School District; Evan R. Keislar, UCLA specialist in automated teaching; Ray Denno, Sutherland Films; and Raymond Blake, San Diego City Schools. A week of intensive work is promised. One unit of credit will be granted; tuition $10. Applications to the dean of summer sessions must be on file by June 8.

TECNIFAX will conduct its summer conferences at Holyoke, Mass., this year during the weeks of June 27 and August 29. Organized around the utilization of the overhead projector, the conferences will also include discussion of the psychology of communication and instruction in the techniques of preparing projected materials. Participants may spend from one to five days, although Tecnifax recommends a minimum of three.

These conferences are part of a continuing schedule of seminar-workshops conducted by Tecnifax for the past five years. There will be no charge for instruction and materials—vacationing educators take note. For details write: Fred Pula, Visucom Director, Tecnifax Corporation, 195 Appleton St., Holyoke, Mass.

THE NEW YORK STATE Audio-Visual Council is holding its summer meeting in Schenectady July 7-9 at the Hotel Van Curler.

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Streamlining Your Staff

(Continued from page 145)

administration, better service, and most important, easier routines for each individual. I must admit that some staff members were not fully aware of the real meaning of the meetings nor the requests made upon them. There is no way of telling now whether the total program might have been improved if I had made clear what I was seeking. The prime desire was to get objective evaluations by each staff member. Some were college part-time employees. Others were new to the office. I was not always fully cognizant of their attitudes, loyalties, nor inter- and intra-staff relationships.

This particular point needs to be expanded further as part of each of the four practices. Two major factors stood out in the study of individual relations: effect of experience and effect of personalities. No matter how excellent the techniques or practices, no matter how superior the direction or leadership—no program of this nature can be effective unless these two human relations factors are considered.

The past experiences on other jobs and on this one were a vital part of the final decision. Each individual brought prejudices and habits as well as objective suggestions to each conference and discussion. Most noticeable were certain personality effects. We had to change the booking counter (See Figures II and III) because of the closeness of operation of two employees. Special training had to be given to one clerk whose job was changed almost exclusively to public contact because of the new room arrangement. Her attitude toward the public left much to be desired but because she had participated in the entire evaluation herself she was not offended when special training was required of her.

Outcomes

The audiovisual staff now visit my office regularly with suggestions, recommendations, complaints; they also make minor decisions within their own areas. There is a continuous feeling that improvement of service is as vital as providing service.

Both of these are healthy factors in an office. First, I believe that all staff members should participate in the evaluation. Second, I believe the evaluation should be continuous. Third, I believe that through these means flexibility is maintained during static periods as well as expansion. Fourth, I believe that a staff must be able to make adjustments immediately. This is extremely important in an audiovisual program where many factors can cause disruption of routine in a matter of minutes—truck breakdown, driver illness, forgotten holidays, extreme weather conditions, washed out roads and bridges, staff illness. Fifth, I believe that it is my job to see that staff salary scales are increased, or simply that salary raises are forthcoming. At least, the staff should know that a sincere and honest effort is made to achieve every possible gain for them. Sixth, I believe that the application of business practices can help audiovisual directors provide more effective service to schools.

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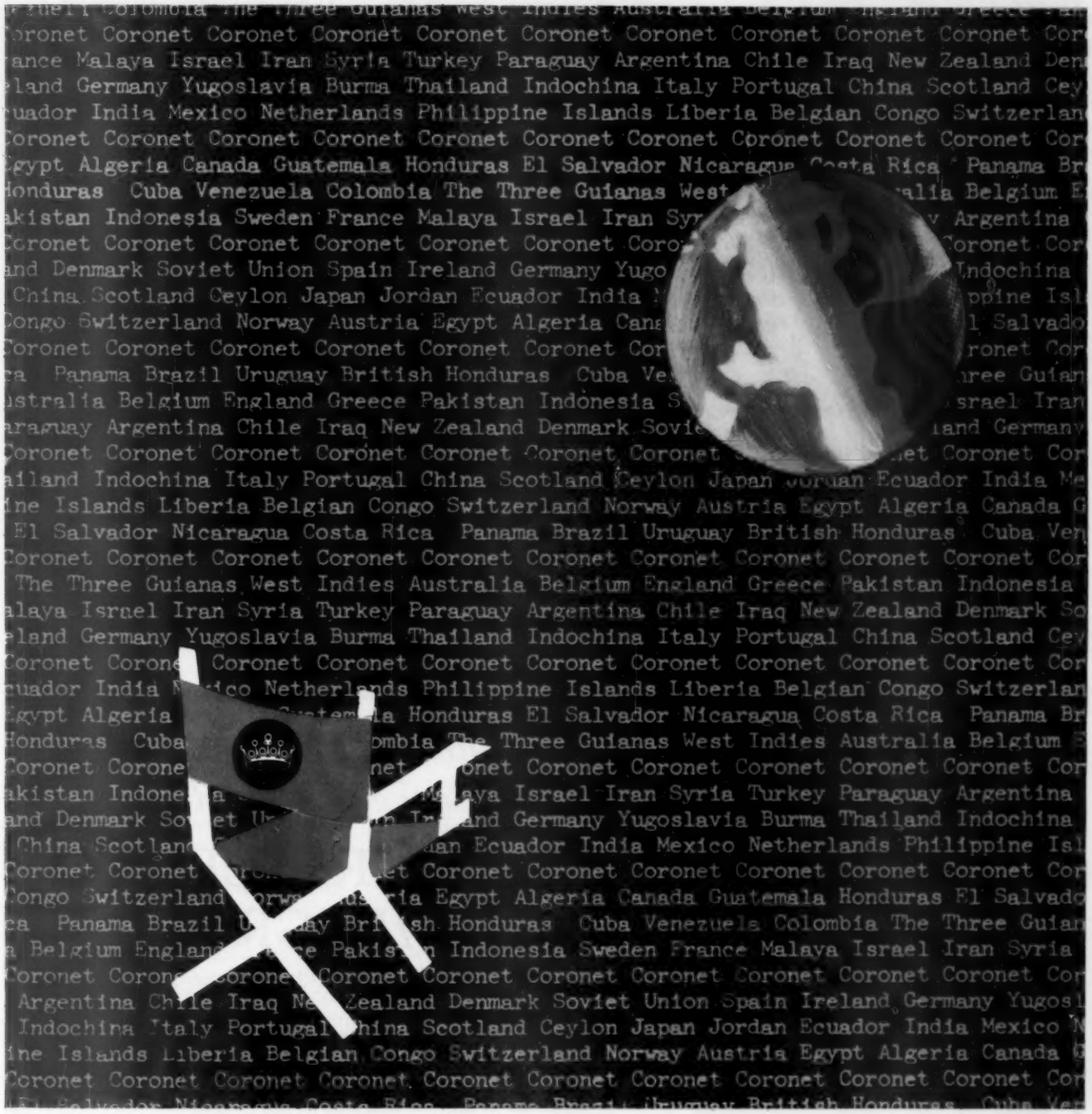
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Testing Audio Equipment by Ear

IT IS QUITE POSSIBLE to test the quality of speech sounds reproduced on your audio equipment without using electronic testing devices or sound spectrograms. All you need is a good ear. Whether you are concerned with a disc turntable playback or a tape playback, be assured that the following practical tests outweigh all the specifications offered by the salesman or the engineer. However, the first four tests below require that the recording be done not by yourself but by someone else, so that the order of the test sounds (and preferably the identity of the speaker) is not known by you in advance. Otherwise, your test results may be falsified by your foreknowledge.

1. If you have means of recording, utter *s* and *th* sounds in random order: for instance, *thin, sin, sigh, thigh, sin, thigh, thin, sigh.* Then listen through headphones (and a loud speaker if possible). The distinction between *s* and *th* must be extremely clear. The *s* must not have the least resemblance to a *th;* it must possess the sharp sibilant hiss which characterizes it when your open hand is held six inches away from your mouth but which deteriorates as you bring your open hand close to your lips. Reasons for this are well known. The *s* and *th* friction noises show nearly the same frequencies on a spectrum—from about 3000 cycles per second to a little over 7000 cps—but the *th* noise is at a much lower intensity (loudness). So if the *s* sounds like *th*, it means that the frequencies above 3000 cps are absent or too weak to be effective.

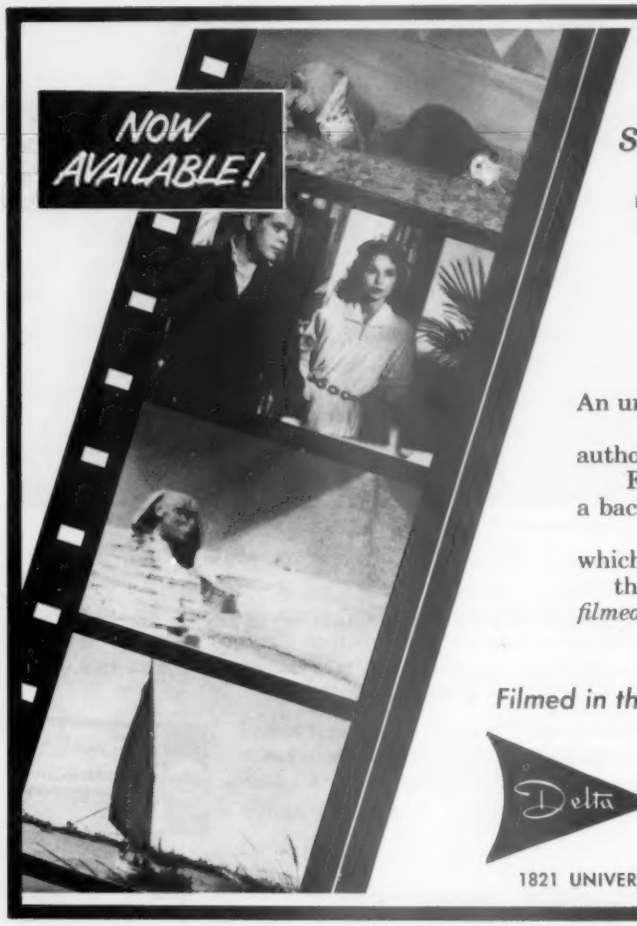
2. Apply the same test to the comparison of *s* and *f* sounds, using words like *fin, sin, sigh, phi.* If the distinction is not very clear, or if an *s* sounds somewhat like an *f*, the audio equipment is even worse than in the case of *s* being confused with *th.* It means not only that the frequencies above 3000 cps are absent or too weak but that the frequencies below 3000 cps (the range of vowels) are mediocre.

3. Now test the distinction between *th* and *f* in words like *thin, fin, thigh, phi.* This distinction is more critical than the preceding ones. Friction noises of *th* and *f* show nearly the same frequency spectrum and the same low intensity. The *f/th* distinction is due mainly to very different formant transitions and partly to a very high frequency band (around 11,000 cps) which is present in *f* and not in *th.*

4. More critical even than good distinction among the phonemes is the recognition of voice quality. Record an utterance by someone other than yourself and play it back. If you recognize his personal voice quite satisfactorily, the equipment is good. Voice quality fidelity requires certain high formants, mainly the fourth, fifth, sixth, etc., which are all above 2500 cps.

5. Wow and flutter, which depend mainly on the *mechanical* perfection of certain parts in a tape recorder, can be tested with the help of a piano. Strike a key and hold it down, or apply the loud pedal, while recording the fading resonance of the tone. If there is any wow, you will notice it during the playback of the resonance.

Of those five tests, the first one is the least critical, but it is generally sufficient to determine rapidly whether a piece of equipment is worth considering or not.—PIERRE DELATTRE
The University of Colorado



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The Audio Cyclopedia by Howard W. Tremaine is a 1280-page volume containing answers to more than 3400 questions on audio. Any subject can be easily found from the 54-page index by means of a chapter and paragraph numbering system. The book contains 26 sections which cover everything from basic principles of sound through methods of recording and reproduction, magnetic and optical film recording, motion picture projection equipment, test equipment, installation techniques, general information charts, and tables. 354 half-tones, 1300 line drawings. DAVI Technician George Koutsoukos calls it "a good source book for technicians and others with background in electronics and especially good for audio technicians in the AV field." From Howard W. Sams & Co., Inc., 2201 East 46th St., Indianapolis 6, Ind. $19.95.

(Continued on the next page)

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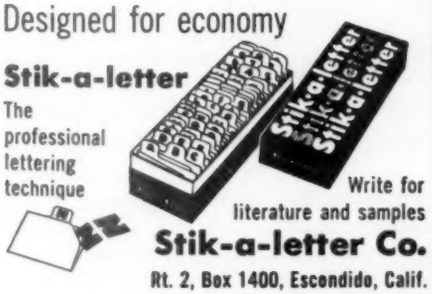

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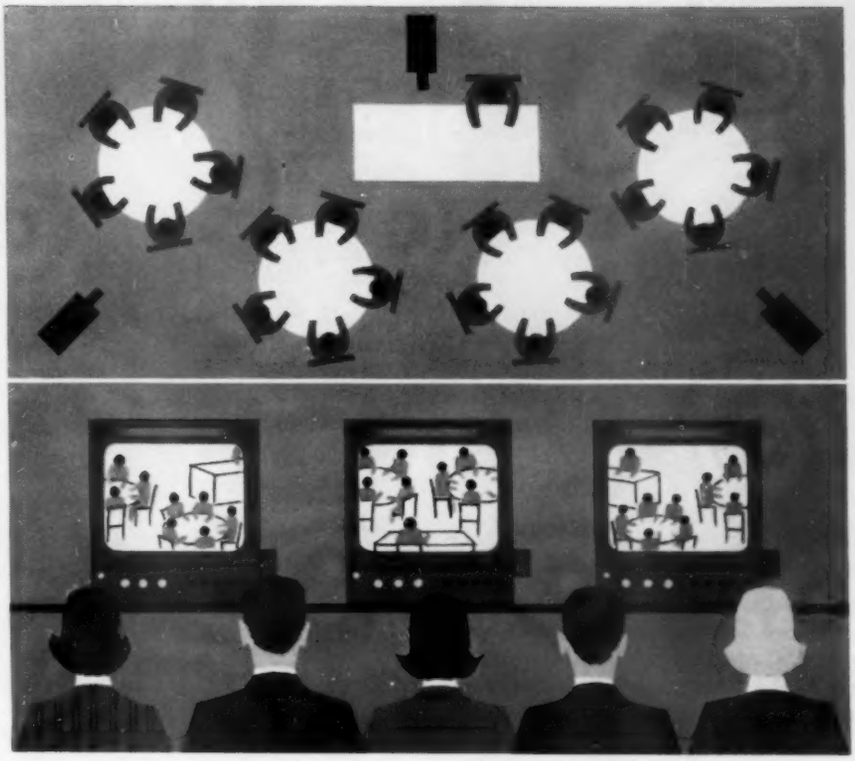

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Notice! Notice!

The promotional film made by the Florida Audiovisual Association for the 1961 Convention in Miami and shown at the Cincinnati Convention is available for loan to state associations or any other organized AV group wishing to help promote attendance in Miami. Write to James E. Harbin, Director, Materials of Instruction, Leon County Schools, 925 Miccouskee Road, Tallahassee.

To Teachers of Summer Courses

Here is an interesting offer for all teachers of audiovisual courses. Write to Florence Fan at the national office for (1) sample copies of AUDIOVISUAL INSTRUCTION and (2) handouts explaining DAVI's special membership offer to students. One-year memberships will be offered all students for $5, despite the July raise to $7. The magazine and other mailings to these special $5 student members will no longer be in bulk—all materials and communications will be directed to the student's address.

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EDITORIAL | *Anna L. Hyer*

Don't just do something / STAND THERE

THE NEW YEAR AS A POINT for assessment and redirection is a most arbitrary assignment probably arrived at by persons more concerned with fitting people to logical systems than systems to the behavior of man.

There is support for the premise that Spring is the season when radical events are most apt to occur. As a few miscellaneous examples, consider love and marriage, Communist May Day celebrations, new spring hats, income taxes, changes in nature, the Druid Maypole dances, Easter among Christians, Passover among Jews, and Nowroze among Mohammedans.

Editor in spring hat

Spring being here, many of you are approaching the end of another school year and must be looking back with justifiable pride on some accomplishments, with regret on some failures, and looking forward, projecting plans for another "go" in a fresh year.

We here in the national office are analyzing our activities along much the same lines. What we see disturbs us. We seem to get so busy doing things that we do not have time to build a rationale to serve as a basis for deciding what to do and what to leave undone; as a result we end up trying to do everything. Our atomistic, day-by-day operation often fails to add up to a clearly discernible "program."

We would like to think that our plight is a unique one, but we don't really believe it is. We see many individuals who are hurting themselves and their major interests by doing a less than adequate job, not because they are not capable of better work but because they haven't allowed themselves time to think and plan.

The ailment affects groups as well as individuals. For example, the DAVI Executive Committee and Board of Directors usually spend so much time on operational specifics that they never have time for determining major policies and directions. Granting that the former is necessary, some remedy must be found if DAVI is to utilize fully the leadership capabilities of these governing bodies. Longer and more frequent meetings at more propitious times might be one solution, if and when such meetings can be financed. In the meantime we must consider a reorganization of our operating procedures which will provide a focus on fewer and more basic issues.

The teaching profession through the NEA is spending much time and money to obtain more teachers and more adequate financial support for education, but spending relatively little in planning what it will do when these results are obtained. Given these conditions, one can safely predict that "more of same" will result.

The recent White House Conference on Children and Youth furnishes another example. We hoped that this meeting of 7000 citizens "who shared a deep concern for the children and youth of the Nation" would identify a few basic problems and dig deeply into these. But no. The 18 theme assemblies and the 210 workgroups (all on segmented problems) came up with such startlingly revolutionary recommendations as suggesting public and private financial support at the local, state, and national levels for the further development of non-commercial educational television stations; recommending that youth be encouraged to be sensitive to the influences of these media upon their attitudes, standards of behavior and ethical judgments related to society; and advocating that, with respect to attendance at entertainment films, the individual should be encouraged to form his canons of choice and to follow them! (from the Mass Media Forum)

There was a thread which seemed to run through several of the forum addresses—the discrepancy between the ethical and esthetic standards we adults profess and the ones we live by. It was pointed out that the example of adults is a stronger factor in determining behavior of youth than parental discipline or formal teaching about desired behavior. But no one seemed to find time to attack this basic problem. A conference designed to develop "Blueprints for the Future" could be expected to deal with fundamental issues in considerable depth. By the conference design we were lulled into contentment with developing long lists of non-controversial recommendations dealing with symptoms. Several who attended this Golden Anniversary White House Conference now are certain that the reverse of the old proverb is also true, namely, all that's *golden* does not glitter!

But it is Spring and it is difficult to stay disillusioned, so in the spirit of the season let me resolve not to spend all next year just frantically doing something. Now and then I plan to just stand still—or at least sit awhile—and think before I act. I may even be so bold as to ask "why am I doing this anyway?"

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